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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WALLING, MEAGAN S

ART UNIT PAPER NUMBER

2863

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,470

Applicant(s)

MCGEE ET AL.

Examiner

Meagan S Walling

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3 and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tambini (US 5,581,042) in view of Neuhaus (US 4,589,289).

Regarding claim 1, Tambini teaches an apparatus that measures the angle of rotation applied to a fastener by a tool beyond a specific reference point (column 1, lines 51-55), the apparatus comprising a shaft (Fig. 1, Ref. 4); and an angle indicator (Fig. 1, Ref. 17).

Regarding claim 2, Tambini teaches an angle selector adjustable to a desired angle (column 1, lines 57-58); an angle rate sensor that measures the speed (column 1, lines 54-55) and direction (column 3, lines 19-20) of the rotation applied; a processor that calculates a current angle of rotation from the rate sensor measurements (column 1, lines 53-55; column 2, lines 46-47); a zero point indicator that sets a zero point for the processor to calculate the selected angle (column 2, lines 40-42).

Regarding claim 3, Tambini teaches that the zero point is a reference point for the processor to calculate a selected angle (column 1, lines 51-55).

Regarding claim 9, Tambini teaches means for measuring an angle of rotation of the fastener (column 2, lines 42-43), the means for applying comprising a shaft (Fig. 1, Ref. 4);

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means for measuring the angle of rotation of the fastener from a fixed reference point (column 1, lines 51-55); and means for displaying the current angle of rotation (Fig. 1, Ref 17).

Regarding claim 10, Tambini teaches means for selecting a desired angle of rotation (column 1, lines 57-58), means for sensing data from the rate and speed of the rotation being applied to the fastener (column 1, lines 54-55), means for calculating the angle of rotation from the data (column 1, lines 53-55; column 2, lines 46-47), means for indicating a zero point from which the means for calculating basis the angle measurements (column 2, lines 40-42), and means for indicating the current angle as determined by the means for calculating (column 2, lines 46-47).

Regarding claim 11, Tambini teaches means for applying torque to a fastener (column 1, lines 49-50).

Regarding claim 12, Tambini teaches measuring the angle of rotation as applied to the fastener by a tool (column 2, lines 42-43); and displaying the current angle of rotation (column 2, lines 46-47) with an angle indicator (Fig. 1, Ref. 17).

Regarding claim 13, Tambini teaches selecting a desired angle using an angle selector on an apparatus comprising an angle selector (column 1, lines 53-54), an angle rate sensor (column 1, lines 54-55), a processor (column 2, lines 44-45), a zero point indicator (Fig. 2, Ref. 7), and an angle indicator (column 2, lines 46-47); indicating a zero point to the processor (column 2, lines 41-42); applying torque to the fastener with a tool to which the apparatus is attached to rotate the fastener (column 1, lines 49-50); measuring the rate and speed of the rotation with the angle rate sensor starting from the zero point (column 1, lines 53-55; column 2, lines 43-44); and calculating an angle of rotation using the processor (column 2, lines 44-46).

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Regarding claim 14, Tambini teaches that the processor indicates that it has accepted the zero point (column 2, lines 34-38).

Regarding claim 15, Tambini teaches alerting that the desired selected angle of rotation has been reached (column 4, lines 46-48).

Regarding claim 16, Tambini teaches a tool that applies torque to a fastener (column 1, lines 49-50); an apparatus that measures the angle of rotation beyond a specific reference point (column 2, lines 42-43) the apparatus configured to fit between the tool (Fig. 2, Ref. 1) and the fastener (Fig. 2, Ref. 9); and an angle indicator (Fig. 1, Ref. 17).

Regarding claim 17, Tambini teaches an angle selector adjustable to a desired angle (column 1, lines 57-58); an angle rate sensor that measures the speed (column 1, lines 54-55) and direction (column 3, lines 19-20) of the rotation applied; a processor that calculates a current angle of rotation from the rate sensor measurements (column 1, lines 53-55; column 2, lines 46-47); a zero point indicator that sets a zero point for the processor to calculate the selected angle (column 2, lines 40-42).

Regarding claim 18, Tambini teaches that the tool comprises a ratchet (column 3, lines 18-19).

Tambini does not teach that the angle indicator is located away from and linked to the apparatus (claims 1, 9, 12, and 16).

Neuhaus teaches a device for tightening a screw beyond the yield point by controlling the angle of rotation that includes an angle of rotation indicator that is located a certain distance away from the screw fastening itself (column 7, lines 28-31).

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It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Tambini with the teachings of Neuhaus to locate the angle indicator away from the apparatus. The motivation for doing so would be to be able to easily read the angle of rotation (Neuhaus, column 7, lines 28-31).

2. Claims 4, 5, 23, and 24 finally are rejected under 35 U.S.C. 103(a) as being unpatentable over Tambini in view of Neuhaus and further in view of Ermer et al. (US 2003/0040883).

Regarding claims 5 and 24, Tambini teaches a sound-generating device that activates when the selected angle of rotation has been reached (column 4, lines 46-48).

Tambini teaches all the limitations of claims 4, 5, 23, and 24 except the limitation that the angle indicator is a digital automotive tester.

Ermer et al. teaches using an external device with a digital automotive tester for measuring rotational speed (paragraphs 0009 and 0011).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Tambini and Ermer et al. to measure the rotational speed with a digital automotive tester to find the angle. The digital automotive tester does everything that a standard multimeter does and beyond (Ermer et al., paragraph 0007), so with the correct measuring device, it can be used to find the rotational speed and angle.

3. Claims 6 and 20 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Tambini in view of Neuhaus and further in view of Stanis (US 5,095,746).

Tambini teaches all the limitations of claims 6 and 20 except the limitation that the angle selector is a potentiometer.

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Stanis teaches using a potentiometer for entering a maximum angle (column 3, lines 56-59).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Tambini with the teachings of Stanis to use a potentiometer as an angle selector. A potentiometer can be used for manually entering a desired angle, so it would be obvious to use it as an angle selector.

4. Claims 7 and 21 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Tambini in view of Neuhaus and further in view of Stanis and Suzuki et al (US 4,308,779).

Tambini teaches everything claimed in claims 7 and 21 except that the angle selector is a resistance ladder.

Stain teaches that a potentiometer can be used as an angle selector (column 3, lines 56-59). Suzuki et al. teaches that a potentiometer can be in the form of a resistance ladder (column 15, lines 64-64).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Tambini with the teachings of Stanis and Suzuki et al. to use a resistance ladder as an angle indicator. As already shown, a potentiometer can be used as an angle selector. Since a potentiometer can be in the form of a resistance ladder, a resistance ladder can also be used as an angle selector.

5. Claims 8 and 22 are final rejected under 35 U.S.C. 103(a) as being unpatentable over Tambini in view of Neuhaus and further in view of Chastel et al. (US 5,571,971).

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Tambini teaches all the limitations of claims 8 and 22 except the limitation that the processor is a microcontroller.

Chastel et al. teaches using a microcontroller as a processor to perform calculations (column 9, lines 48-49).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Tambini with the teachings of Chastel et al. to use a microcontroller as a processor. A microcontroller can be used to make calculations quickly and so using a microcontroller would expedite the process.

6. Claim 19 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Tambini in view of Neuhaus and further in view of Codrington (US 6,345,436).

Tambini teaches all the limitations of claim 19 except the limitation that the tool comprises a socket.

Codrington teaches a torque tool comprising a socket (Fig. 1, Ref. 24).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Tambini and Codrington to form a torque tool with a socket. The socket can be used to tighten a fastener such as a screw or bolt and therefore it could be used to find the angle of rotation when tightening the fastener.

Response to Arguments

Applicant's arguments filed 5/14/03 have been fully considered but they are not persuasive.

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In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the method of setting of the zero-point) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's amendment of claims 1, 3, 9, 12, 13, and 16, the addition of the limitation that the "apparatus comprises a shaft" does not overcome the rejection over the prior art (Tambini) as the apparatus taught in Tambini clearly comprises a shaft (see Fig 1, Ref. 4 and Fig. 2, between Ref. 8 and Ref. 7). Furthermore, the limitation that the angle indicator is "located away from and linked to the apparatus" has been overcome by the addition of the Neuhaus reference that clearly teaches an angle indicator of a torque wrench located away from and linked to the apparatus.

In light of the arguments presented above, Applicant's argument regarding the improper obviousness rejection is moot since the independent claim is not allowable. Therefore, all rejections made under 35 U.S.C. § 103(a) stand as written.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meagan S Walling whose telephone number is (703) 308-3084. The examiner can normally be reached on Monday through Friday 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

msw
August 12, 2003


John Barlow
Supervisory Patent Examiner
Technology Center 2800